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ABSTRACT

Initiations of prosocial actions by mainstreamed handicapped and normal preschool children were studied to discover (1) which preschool activity setting was more conducive to prosocial interactions; (2) which specific prosocial bids were more likely to occur in various settings; (3) whether frequency of prosocial behaviors was related to preferential directionality; and (4) what proportion of prosocial behaviors were child-initiated rather than teacher-directed. Six types of prosocial bids were recorded for 10 typical and 5 special children in four activity settings. Findings indicated that setting had a significant effect. Most of the 210 prosocial bids occurred during free play, many during structured play and gym, and the fewest during teacher-directed structured circle time. Sharing, cooperating, and helping were the most frequent prosocial behaviors. Sympathy and praise were rare. No nurturing was observed. In addition, no directionality preferences were found. Typical children initiated twice as many prosocial bids as did atypical peers. Taking into account the expected probabilities for interactions given the significantly different prosocial activity levels for each group and the different numbers of children per group, no preferences, or "prejudices," were found. It is concluded that contact alone with typical children does not build interpersonal skills of atypical children. Teachers and therapists must specifically model and facilitate prosocial skills. (Author/RH)

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Prosocial Behaviors of Handicapped and Typical Peers In An Integrated Preschool [1,2]

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Summary

This Study explores initiations of prosocial actions by mainstreamed handicapped and normal preschoolers to discover:

a) which preschool activity setting was more conducive to prosocial interactions.

b) which specific prosocial bids were more likely to occur in which setting.

c) whether frequency of prosocial behaviors was related to directionality, since typical children are reported to choose interactions with typical rather than atypical peers preferentially.

d) what proportion of prosocial behaviors were child initiated rather than teacher directed.

Six types of prosocial bids were recorded for 10 typical and 5 special (4 autistic, 1 multiply handicapped) children (mean age 4.4) in 4 activity settings (80 total minutes per child). Setting had a significant effect. Most of the 210 prosocial bids occurred during free play, many during structured play and gym, and the fewest during teacher-directed structured circle time. Sharing, cooperating and helping were the most frequent prosocial behaviors. Sympathy and praise were rare; no nurturing was observed.

No directionality preferences were found. Typical children initiated twice as many prosocial bids ($\bar{X}$=20) as atypical peers ($\bar{X}$=10.2). Taking into account the expected probabilities for interactions given the significantly different prosocial activity levels for each group and the different numbers of children per group, no preferences or "prejudices" were found.

Contact alone with typical children does not build interpersonal skills of atypical children. Teachers and therapists must specifically model and facilitate prosocial skills.

Prosocial Behaviors of Handicapped and Typical Peers In An Integrated Preschool

Peer relationships are very important for social and cognitive development in young children. Children learn not only from adults, but also by watching and interacting with one another. Self-contained classrooms have been particularly criticized for depriving handicapped youngsters of opportunities to engage in positive social interactions with normal peers. Yet, children do show a clear preference for interactions with peers who are similar to themselves and will gravitate toward those peers (Faught et al, 1983). Thus, positive interactions between handicapped and nonhandicapped peers may be less likely to occur spontaneously. In mainstreamed preschool programs, however, an important goal is to enhance the potential for such positive interactions. In such programs, normal children are often encouraged to reach out in friendly and prosocial ways to handicapped peers (McHale et al. 1980).

The mainstreamed setting provides a basic structure to sensitize children to accept individual differences among people. Yet typical children do not easily accept the handicapped children as friends (Madden & Slavin, 1983). Indeed, both nonhandicapped and handicapped peers have been found to imitate a nonhandicapped peer more frequently (Cooke, Apolloni & Cooke, 1977; Peterson et al., 1977). Rewarding models are imitated by preschoolers more than unrewarding models (Hartup & Coates, 1967). Young children are able to perceive children as different from themselves, and typical children perceive handicapped children as younger and weaker than they are (Strain, 1984), thus making prosocial overtures more problematical. Blackmon & Dembo (1984)

reported that in a mainstream preschool, handicapped children received neither empathic nor helping support from their peers. However, early experiences between typical and special children can serve to sensitize children to accepting individual differences (Levine & McColoum, 1983; Madden & Slavin, 1983).

Mainstreaming per se does not encourage prosocial interactions between typical and atypical peers. Interactions must be planned for, structured and facilitated by teachers to assist the special child to become adept at toy play with typical peers (Fredericks et al., 1978; Wehman, 1979). Cooperative, nonacademic tasks have been found to increase acceptance of handicapped peers and also increase their self esteem (Stainback et al., 1981). Cole (1986) reports that teacher intervention tools, consisting of prompting, rewarding and modeling, enhanced cooperative behaviors between typical and atypical peers. However, the dyadic sessions were short (10 minutes), artificially structured, and carried out only for a limited 8 week time period. Verbal and physical prompts and verbal praise contingent upon handicapped preschoolers' appropriate social behavior have been found to increase their positive social behaviors (Strain et al; 1976).

Objectives

The effects of mainstreaming handicapped children, particularly for the enhancement of intellectual and positive social skills, is a concern for special educators. Yet little research has been done on prosocial interactions between typical and special peers.

The objective of the present study was to explore the initiations of prosocial actions by handicapped and typical peers. Specifically, this study attempted to discover:

a) which preschool activity settings in a program that mainstreams handicapped and typical preschoolers may be more conducive to increased frequency of prosocial interactions.

b) which specific prosocial interactions are more likely to occur in which settings.

c) whether frequency of prosocial behavior is related to directionality, whether from typical peers (to typical and to handicapped) or from handicapped peers (to typical and to handicapped).

d) in a mainstreamed setting, what proportion of prosocial peer behaviors are peer initiated as compared to teacher-directed.

Method

Fifteen preschool children attending a mainstreaming special school were observed during four different activity periods. A time sampling technique was used. After the children had been in the program together for two months, each child was observed twice for 10 minutes in each of four activity settings. Children were randomly assigned for eighty minutes of observation per child over a six week period.

Six types of prosocial behavior were operationally defined and initially coded separately during the observations. These behaviors were:

Sharing: giving away or allowing temporary use of a toy or object previously in one's possession

Helping: attempting to meet another's needs; giving useful information or assisting another in his or her task

Nurturing: carrying out concerned, supportive, empathic actions or behaviors to alleviate the distress of another child

Cooperating: working together with another child for a common purpose or joint activity

Sympathizing: expressing regret, either through vocal or bodily gestures, at peer's distress

Coding reliability across settings by two independent coders was 85%. To check the accuracy of coding each specific prosocial behavior, a second rater independently rated 28 randomly selected examples of the six target prosocial behaviors into these six categories. Interobserver reliability was 82%. Tallies for the six types of prosocial behaviors were also combined to provide a total prosocial score for each child.

Subjects

The subjects were ten typical children (3 boys, 7 girls, mean age 4.7 years) and five special children (4 boys , 1 girl, mean age 4.1 years). Four of the special children are labeled autistic and one is multiple handicapped/language delayed. There are four teachers in the classroom for the 15 children.

Settings

Four typical school settings that are part of the daily routine of the school each morning were selected for observation:

Free play/ unstructured playtime. In this setting, teachers arrange attractively a variety of toys and play materials in the classroom. Play is pupil initiated with minimal input from teachers.

Circle time. This a structured, teacher-directed learning activity time. Listening skills are emphasized. Students are asked to respond to questions and take turns in an activity.

Structured play. Three teacher-planned activities are rotated every 15 minutes in the classroom. Materials and direction are

provided by the teacher. Children are encouraged to participate with materials and with each other.

Gym. In this unstructured playtime, students are free to move about the gym and use gross motor toys for play. Teachers provide supervision and some play suggestions, but no direct instruction.

Only prosocial behaviors initiated toward a peer by a child were tallied. Observations indicate whether these behaviors occurred spontaneously or with teacher direction. Prosocial interactions received were not tallied nor were interactions directed toward teachers or other adults.

Results and Discussion

A total of 261 prosocial behaviors were recorded during 1200 minutes of observation.

Activity Setting

One way analysis of variance confirmed that activity setting was significantly related to the frequency of emission of prosocial interactions by all the children ($F=4.67; p<.01$).

Figure 1 shows that prosocial behaviors were most frequent during

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Insert Figure 1 about here

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free play ($N=98$), less frequent during gym activity ($N=65$) and least frequent during structured circle time ($N=22$).

In this school, free play is totally directed by the children themselves. They are free to choose activities in the classroom based on their own interests. They may remain at any activity as long as they choose. Children are encouraged to remain within the classroom, which increases the chances for social interactions. There is limited

space to move about, and contact with peers is frequent. Structured play had the second highest frequency of prosocial interaction (N=76). peers. Partner and sharing activities are the main focus of play. Each child has a small set group of peers with whom to interact, and these groups were stable for several months before the data collection began. The gym is a large area, not as conducive to social interactions; activities tend to be more physical, and play is often parallel in nature. Circle time is a teacher - dominated activity. Students are required to listen; interaction is discouraged.

Figure 1 shows graphically the uneven distribution of prosocial behaviors emitted by the children in the four preschool settings. It is evident that when children are 1) either kept within a rather confined classroom space and allowed freely to select their own preferred activities and time spent at them, or 2) when teachers actively create small social groups of children and deliberately promote interactive games, then prosocial initiations are more frequent. In contrast, either too much freedom and lack of structure in a large spatial area (the gym) or too little freedom and structure that focuses children on the teacher exclusively, both depress the frequency of prosocial peer interactions that children initiate. Teachers who are aware of the potential power of environments to restrict or support such interactions can better structure activity settings and the length of time that preschoolers spend in them, so that the program goal of social skill building is met.

Type of Prosocial Interaction as a Function of Setting

Certain prosocial behaviors were far more frequent than others (see Figure 2). Frequencies also varied as a function of the activity

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Insert Figure 2 about here

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setting. The frequencies of occurrence for the various prosocial behaviors were:

sharing: N=108

helping: N=64

nurturing: N=0

cooperating: N=76

sympathy: N=6

praise: N=7

In free play, structured play, and gym, the most frequently observed prosocial behaviors were sharing, helping, and cooperation. Note that for these 4 year olds, praise and offering sympathy were minimal in all settings and comprised .04% of the children's prosocial behaviors. Nurturing behaviors were not observed.

Prosocial actions of all types were lowest in highly structured, teacher-dominated circle time, an instructional activity that demanded full focus on the teacher's presentations and requirements. If teachers wish to encourage a variety of prosocial actions, then they need to structure situations that elicit cooperation, sympathy, empathic concern for others' distress, praise of peers' efforts, and kindly helpful actions (Knoblock,1982; Peck & Semmel, 1982; Poresky & Hooper, 1984) used a combination of variables: social toys (such as dolls, fake foods, and kitchen ware), reinforcement and cooperative lesson plan, (e.g. wrapping a present together, or icing a cake) to increase handicapped preschoolers' social play, from basically solitary

to at least parallel play. However, when teachers discontinued structuring children's social interactions, then the handicapped children's social interactions regressed dramatically. Active teacher work is important to ensure sustained increases in prosocial interactions of atypical preschoolers. Associative and cooperative play increased significantly from near zero levels among handicapped preschoolers when teachers directly structured play experiences between 5 typical peers and 7 atypical children three times weekly (Devoney, 1974). Direct structuring of play without the participation of the typical peers had initially not increased cooperative play behaviors among the handicapped children. Nor had cooperative play increased when the typical and atypical children simply had been allowed to play together.

Even within structured learning times, teachers can make more of an effort to involve children in awareness of prosocial actions. The use of animal and child stories that reflect altruistic prosocial feelings, thoughts and activities can promote a child's awareness of specific helpful actions. This bibliotherapy helps children develop empathic feelings, concerns, and ways to work together cooperatively. Planning activities that require turn taking or sharing, as in cooking, group mural painting, or dramatic play where several roles are required (Simeonsson et al; 1979), are possible ways in which teachers can promote more prosocial interaction. Some social skill learning packages have already been used in mainstreamed classroom (Killoram et al, 1982; Rule et al, 1986).

Directionality of Prosocial Behaviors

Table 1 shows that far more prosocial behaviors were initiated by

typical children (N=210) than special children (N=51).

Insert Table 1 about here

Typical children carried out a mean of 14 prosocial actions toward typical peers (TT) during each 80 minute observation period, and a mean of 7 prosocial actions toward atypical peers (TA). In contrast, atypical peers made a mean of 3.8 prosocial bids toward other atypical children (AA) and a mean of 6.4 prosocial bids toward typical peers (AT). In sum, typical children initiated a mean of 21 prosocial behaviors compared to atypical peers' mean of 10.2 prosocial behaviors [t (13) = 2.6, $p<.025$]. The average prosocial activity level of the special children was one-half that of the typical children.

Taking this significant differential activity level and the unequal numbers of typical and special children into account, one can then compute the expected frequency of prosocial actions for each directionality (TT, TA, AA, and AT) under the null hypothesis that there is no preferred difference in the patterns of directionality of prosocial bids for either group. Table 1 shows that no differential directionality was found [χ^2(3, N = 15) = 2.3, p = .50]. Thus analysis of directionality of prosocial behaviors shows that in this mainstreaming school the preschool children felt very comfortable with one another. Typical and special children interacted in prosocial ways fairly typical of each group's general level of interaction, but in no way did the directionality of their prosocial behaviors reflect a tendency to give preference to children of their own or the other group. These typical peers would seem to be good candidates for peer-mediated social skill interventions that teachers can implement in

mainstreamed classrooms (Odom & Strain, 1984).

Variability in Types of Prosocial Initiations

Typical children initiated all categories of prosocial behaviors toward special children except for nurturing. Special children directed some sharing and helping to other special children, and sharing and cooperating toward typical children. Typical children shared, helped, cooperated with and praised other typical children.

When teachers were asked to rank the severity of handicap of the atypical students, they agreed 100% on their ranking. The child ranked as the most severely handicapped was the child who received the most prosocial interactions from other children in the class. Teachers also ranked the atypical children according to their level of social skill ability. The atypical preschoolers ranked first and second in social ability by both teachers were first and second among the atypical children in the number of prosocial interactions that they initiated toward others. Although these numbers are too small to permit generalization, the findings suggest that future research on prosocial interactions of mainstreamed typical and atypical preschoolers will need to make independent assessment of social skill level of the atypical children as a variable which may be related to prosocial initiations regardless of type or degree of handicap.

Spontaneous vs. Teacher-Directed Prosocial Behavior

Figure 3 reveals that the greater number of prosocial behaviors

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Insert Figure 3 about here

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emitted by the children were spontaneous and not teacher-directed (217 vs. 44; $p<.05$). These data attest to the robustness of developing

prosocial interactions among preschoolers. Piagetian theory suggests that decentering does not take place before 7-8 years of age, and that, consequently, truly altruistic behaviors cannot be expected until then. Nevertheless, in this mainstreamed classroom there were 261 prosocial acts tallied during 1200 minutes of observation---almost one every four minutes.

Conclusions

This study shows a marked effect of setting and of integration on prosocial bids. Typical children were significantly more likely than special children to initiate prosocial behaviors. This was to be expected since most of the handicapped children were autistic. The typical children were indeed prosocial in more varied ways with handicapped peers than the handicapped peers were with each other or with typical children.

Yet directionality of prosocial bids did not reflect any tendency for the children to give preference to typical or atypical peers. Mainstreaming is urged as a possible solution to education difficulties of special children, and as a means to ensure their positive mental health. Yet, contact alone with typical children does not build the personal-social skills that handicapped children need if they are to be integrated into emotionally facilitative social friendship patterns typical of their peers. Typical children direct significantly more prosocial behaviors to typical and handicapped peers than do their handicapped peers. However, these data show that a mainstreaming school can create a positive climate for more equalization between both typical and atypical preschoolers.

Prosocial interactions were most frequent during free play in the

classroom and teacher-directed free play time. They were least frequent during gym and rare during teacher-dominated circle time. It is gratifying to note that when teacher-directed learning time provided opportunities for child participation, then prosocial behaviors were also high. Prosocial behaviors were infrequent only in structured circle time that required children to focus on teacher directions.

This study significantly highlights the advantages of mainstreaming in that children were able to be prosocial toward same and different peers. Significantly also, this study shows that proximity is not enough. Certain prosocial actions (e.g.nurturing; praising) were practically never emitted by the handicapped children. Teacher education for work in mainstreamed settings needs to include specific attention to methods by which young children can be encouraged in prosocial behaviors. Puppetry and bibliotherapy reading materials can be used to enhance children's awareness of the many different ways of being a friend. Personal-social interactions must be specifically planned for, facilitated by, and modeled by teachers and therapists in order to enhance the social skills and mental health of atypical preschoolers.

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Footnotes

1
We are deeply grateful to the teachers, parents and students at Jowonio-The Learning Place for supporting this research effort.

2
Paper presented at the biennial meeting of the Society for Research in Child Development, Baltimore, MD, April 1987.

Table 1

Expected and Observed Frequencies of Prosocial Behaviors Initiated Between Typical and Atypical Preschoolers

	Directionality			
Prosocial Bids	TT	TA	AA	AT
EXPECTED	134.2	74.6	14.9	37.3
OBSERVED	140	70	19	32

Note. This calculation is based on expected probabilities for interaction given that for the observed 261 prosocial behaviors, typical children (T) have (10 x 9 = 90) chances for TT interactions and (10 x 5 = 50) chances for TA interactions. Atypical children (A) have ($\frac{5 \times 4}{2}$ = 10) chances for AA interactions (taking into account that their activity level is one-half that of T children) and ($\frac{5 \times 10}{2}$ = 25) chances for AT interactions. Thus, for example, the calculated expected TT probability will be $\frac{90 \times 261}{175}$ = 134.2.

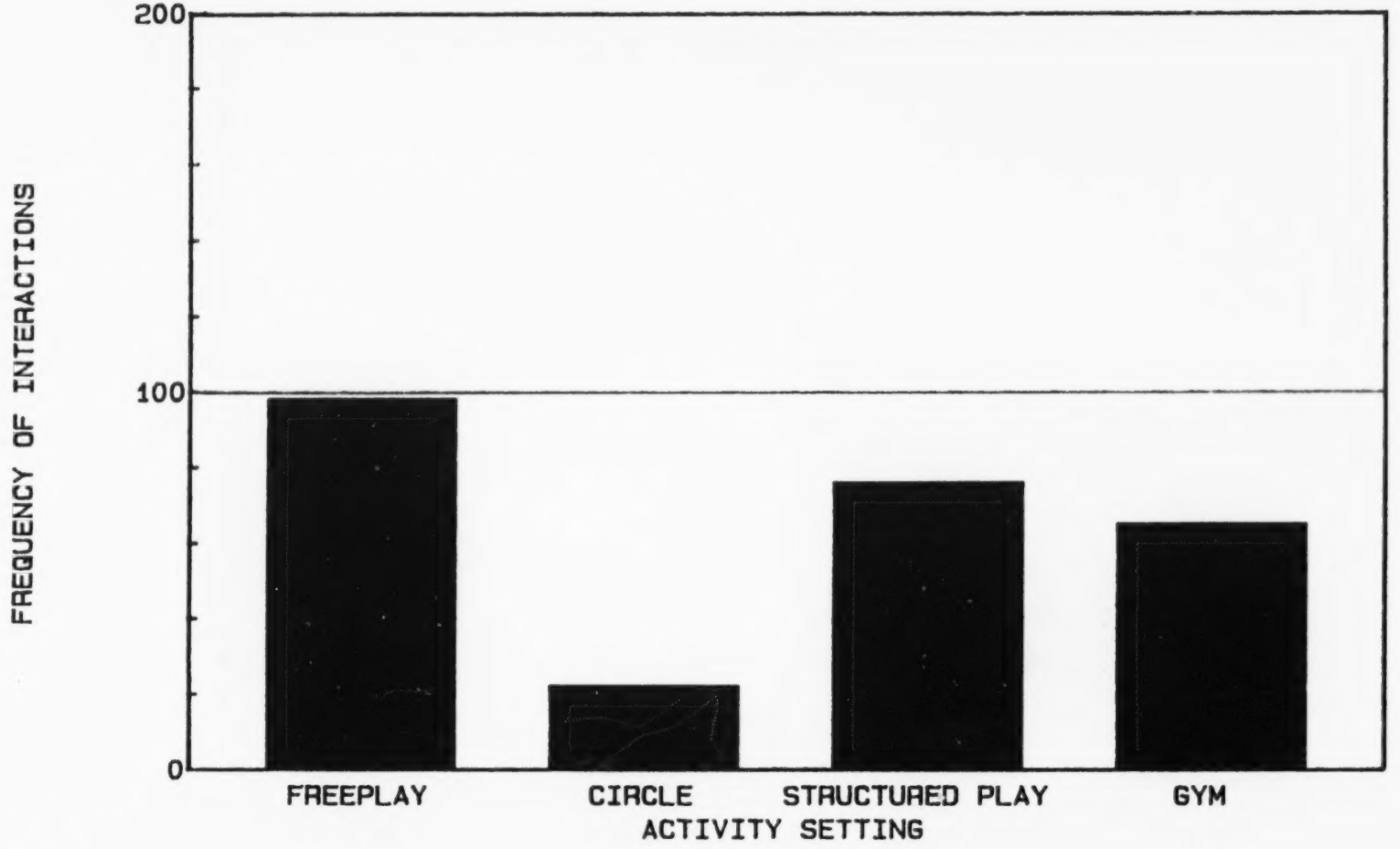
Figure Captions

Figure 1. Frequency of prosocial interactions as a function of preschool activity setting.

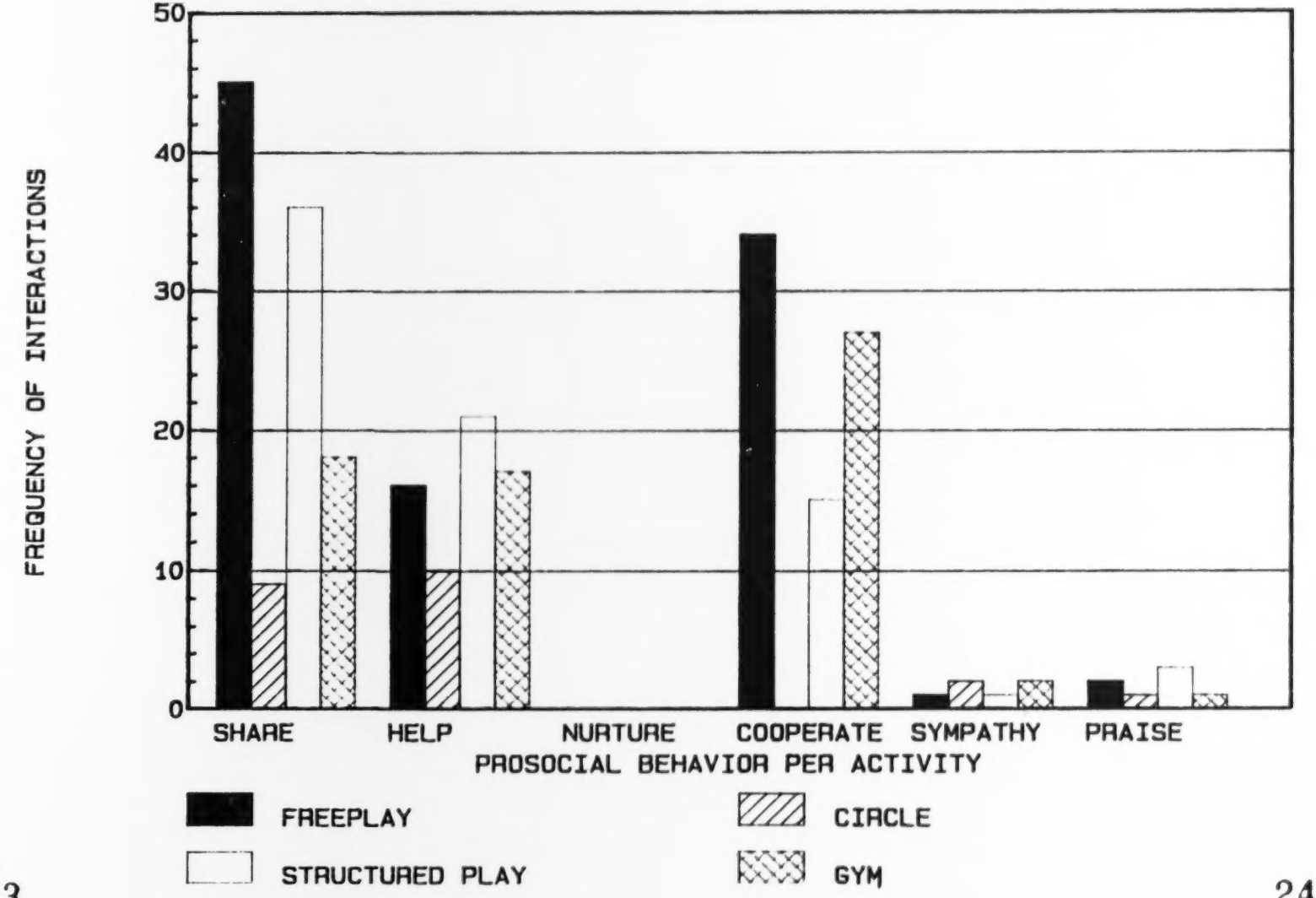
Figure 2. Frequency of specific categories of prosocial behaviors as a function of activity setting.

Figure 3. Frequency of prosocial behaviors as a function of self-initiation versus teacher-direction.

PROSOCIAL BIDS PER ACTIVITY SETTING



TYPES OF PROSOCIAL BIDS PER SETTING



SELF VS. TEACHER DIRECTED PROSOCIAL BIDS